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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,521	03/26/2001	Richard W. Schramke	15-0228	7246

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EXAMINER	
GUTIERREZ, ANTHONY	

ART UNIT	PAPER NUMBER
2862	

DATE MAILED: 02/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/817,521	SCHRAMKE ET AL.	
	Examiner	Art Unit	
	Anthony Gutierrez	2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *12 December 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,6-13,16-23,25,26,28,29,31-33,35-37 and 40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6-13,16-23,25,26,28,29,31-33,35-37 and 40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on *26 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/12/02 have been fully considered but they are not persuasive.

Applicant has argued that the prior art reference of Hasset fails to include the limitations of Smith et al. and Robinson et al. and that the prior art references of Smith et al. and Robinson et al. fail to include the limitations of Hasset.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In the previous office action the examiner has cited support in each teaching reference (Smith et al. and Robinson et al.) and in the primary reference (Hasset) for both cases, that would lead one of ordinary skill in the art at the time of invention to make each respective combination which are equivalent to the inventions claimed by the applicant.

Claim Objections

2. Claim 40 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 40 recites the

limitation "The system of Claim 39". Since claim 39 has been cancelled, claim 40 is objected to.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hassett (5347274).

As to claims 1, 2, and 9, Hassett discloses a system for managing the shipment of hazardous material goods, comprising: a storage device for storing data selected from the group of shipment data, geographic positioning data, weather data, emergency conditions data, emergency response data, geospatial data and combinations thereof (col. 2, lines13-18, 35-43 and 50-54), a processor for retrieving in near real-time and updating at least one data set in the storage module (col. 3, line 63-col. 4, line 3 and col. 5, lines 6-8), an analysis module for analyzing the data and providing the results of the analysis to a user (col. 6, lines 26-38), said analysis module identifying a proposed route calculated based on risk analysis including data selected from the group consisting of an optimal shipment route, an emergency condition determination, an emergency response, and as applicable a projected plume dispersion, said projected plume dispersion being related to the emergency condition determination, wherein the

plume dispersion is calculated based on shipment data, geographic positioning data, and near real-time weather data specific to the emergency condition and physical location of the goods (col. 5, lines 32-46) where it is noted by the examiner that the data is SELECTED FROM (emphasis added) "the group consisting of an optimal shipment route...", etc. Hasset specifically discloses the examples of a regional flood warning or weather-related danger which are examples of emergency conditions and therefore serve as that which has been SELECTED (emphasis added) from the claimed group, and a sensor for monitoring the shipment and transmitting information to the processor in the event of an emergency condition (col. 2, lines 43-59).

As to claims 7 and 8 Hassett further discloses a system further comprising: a network for relaying shipment data, geographical positioning data and near real-time weather data; and an emergency assessment module for projecting potential emergency conditions as a function of the data; wherein information about the projected emergency conditions is transmitted over the network and is available for access at remote locations (col. 5, lines 32-46).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 10,11,16-22, 29, 33, 35-37, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassett (5347274) in view of Smith et al. (5724255).

As to claim 10, Hassett discloses a method for managing a shipment of hazardous material goods comprising: obtaining shipment data containing information about the goods (col. 2, lines13-18 and 35-43); determining optimal and alternate routes for transport of the goods, obtaining geographic positioning data about the location of the goods as they travel from a starting location to a distribution location, using the geographic positioning data to select weather data related to the location of the goods; monitoring the shipment with regard to transport progress and to detect an emergency condition; calculating a recommended response; and automatically notifying database-defined emergency response authorities (col. 5, lines 32-46). Hassett discloses emergency assessment and notification modules for automatically transmitting an emergency message based on an anticipated emergency condition which is calculated based on shipment data, geographic positioning, geospatial data and weather data (col. 5, lines 32-46).

Hassett does not disclose a system wherein monitoring the shipment includes providing projected plume dispersion if applicable, in response to the emergency condition, wherein the plume dispersion is calculated based on shipment data, geographic positioning data, and near real-time weather data specific to the emergency condition -and physical location of the goods.

Smith et al., however, discloses a projected plume dispersion which is related to an emergency condition determination, the dispersion being calculated based on shipment data, geographic positioning data, geospatial data and near real-time

weather data specific to the emergency condition and physical location, wherein a recommended response is based on the projected plume dispersion (col. 1, lines 29-62).

Hassett further discloses that a method of electronically marking, identifying, and managing hazardous cargo and vehicles could decrease the risk to the general public and might cost-effectively provide information enroute that would enhance safety measures for emergency personnel called to handle an accidental rupture of a hazardous material container (col. 1, lines 55-61).

Smith et al. further discloses that inevitably in production, transportation, storage and use of chemicals accidents occur that can endanger human, animal, and aquatic life and property (col. 1, lines 24-28). Smith et al. further discloses that some of the chemicals that endanger life are dispersed in plumes and because some chemicals generate plumes while others do not, it has become necessary for response personnel to be able to quickly identify harmful chemicals and develop a protective action zone based on various meteorological and physical conditions surrounding the site, which is especially important where the evacuation of human life might be important but also expensive (col. 1, lines 29-61).

It would therefore be obvious to one skilled in the art at the time of invention to modify Hassett in view of Smith et al. in order to provide for a more comprehensive method of hazardous materials management that maximizes cost-efficiency without compromising safety to humans, animals, and the surrounding environment.

As to claims 11, 16-18, Hassett further discloses a system further comprising: a network for relaying shipment data, geographical positioning data and near real-time weather data; and an emergency assessment module for projecting potential

emergency conditions as a function of the data; wherein information about the projected emergency conditions is transmitted over the network and is available for access at remote locations (col. 5, lines 32-46).

As to claims 19, Hassett discloses a method wherein the weather data is selected from the group consisting of wind speed, wind direction, air temperature, precipitation, percent cloud coverage and combinations thereof (col. 5, lines 42-46) where Hassett discloses a regional flood warning as an example, which is related at least to precipitation.

As to claim 20, Hassett discloses a method wherein the shipment data is selected from the group consisting of material, amount, toxicity, remediation methods, shipment source location, shipment destination location and combinations thereof (col. 2, lines13-18 and 35-43) where Hassett discloses reporting the location during shipping and where the mobile unit is programmed with the identity of the hazardous material. These examples are related at least to material, shipment source location and shipment destination location.

As to claims 21 and 22, Hassett discloses a method including using the geographic positioning data to select geospatial data that is selected from the group consisting of road type, surface type, road limitations, speed restrictions, road conditions, traffic speed and density, transport restrictions, inclination and combinations thereof (col. 5, lines 32-46) where Hassett discloses that the management program compiles and updates tracking reports for a load as it progresses along its route so that shipment can be suspended or re-routed depending on a predicted traffic impediment in a particular region.

As to claim 29, 35, and 36 Hassett discloses a management system for shipment of goods (col. 2, lines13-18), the system comprising: a network for retrieving shipment data, geographical positioning data and near real-time weather data; an optimal route module for determining a best route based on relevant static and dynamic considerations; and an emergency assessment module for detecting various conditions of the shipment enroute and projecting emergency conditions likely to be created in the event of an emergency condition of the goods as a function of retrieved data and recommended alterations to the route based on these conditions (col. 5, lines 32-46) and further comprising a sensor for monitoring the shipment, said sensor detecting the emergency condition (col. 5, line 65- col. 6, line 10).

Hassett does not specifically disclose wherein the emergency assessment module calculates an anticipated plume dispersion, if applicable, of the goods related to the emergency condition, the dispersion being calculated based on shipment data, geographic positioning, geospatial data and weather data.

Smith et al., however, discloses a projected plume dispersion which is related to an emergency condition determination, the dispersion being calculated based on shipment data, geographic positioning data, geospatial data and near real-time weather data specific to the emergency condition and physical location, wherein a recommended response is based on the projected plume dispersion (col. 1, lines 29-62).

Hassett further discloses that a method of electronically marking, identifying, and managing hazardous cargo and vehicles could decrease the risk to the general public and might cost-effectively provide information enroute that would enhance safety

measures for emergency personnel called to handle an accidental rupture of a hazardous material container (col. 1, lines 55-61).

Smith et al. further discloses that inevitably in production, transportation, storage and use of chemicals accidents occur that can endanger human, animal, and aquatic life and property (col. 1, lines 24-28). Smith et al. further discloses that some of the chemicals that endanger life are dispersed in plumes and because some chemicals generate plumes while others do not, it has become necessary for response personnel to be able to quickly identify harmful chemicals and develop a protective action zone based on various meteorological and physical conditions surrounding the site, which is especially important where the evacuation of human life might be important but also expensive (col. 1, lines 29-61).

It would therefore be obvious to one skilled in the art at the time of invention to modify Hassett in view of Smith et al. in order to provide for a more comprehensive method of hazardous materials management that maximizes cost-efficiency without compromising safety to humans, animals, and the surrounding environment.

As to claims 33, 37 and 40 Hassett further discloses a system further comprising: a network for relaying shipment data, geographical positioning data and near real-time weather data; and an emergency assessment module for projecting potential emergency conditions as a function of the data; wherein information about the projected emergency conditions is transmitted over the network and is available for access at remote locations (col. 5, lines 32-46).

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hassett (5347274) in view of Robinson et al. (6381538).

As to claim 6, Hassett discloses suspending or re-routing shipments when there is potential to encounter a dangerous condition (col. 5, line 42-46).

Neither Hassett nor Robinson et al. specifically disclose wherein data on the route and along all possible alternative routes includes population density and distribution, political boundaries, environmental boundaries, surface inclination and topology, road surface type, road dimensions, road height and weight limitations, road authorizations for cargo types, and road segment distances.

Robinson et al. however discloses simplifying the route-planning task by suggesting optimized routings based on minimizing certain parameters (col. 4, lines 30-33) and that a course is optimized around various environmental conditions based on specific criteria (col. 4, lines 43-48). It is well known in the art that population density and distribution, political boundaries, environmental boundaries, surface inclination and topology, road surface type, road dimensions, road height and weight limitations, road authorizations for cargo types, and road segment distances are examples of criteria that are related to parameters that when minimized would provide an optimized route. It would therefore be obvious to one skilled in the art at the time of invention to include such criteria in order to provide the most comprehensive minimization of parameters resulting in the most optimal route.

It would be obvious to modify Hasett in view of Robinson et al. in order to provide accurate up-to-date information on the environmental conditions likely to be

encountered during shipping which is necessary for traveling across both a pre-planned and altered route as taught by Robinson et al. (col. 3, lines 39-45 and col. 1, lines 12-28).

8. Claims 12,13, 23, 25, 26, 28, 31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassett (5347274) in view of Robinson et al. (6381538), and further in view of Smith et al. (5724255).

As to claim 12, 23, and 31, Hassett discloses a method for management of shipment of hazardous materials (col. 2, lines13-18), said method comprising: obtaining weather data, shipment data, and geographic positioning data related to the shipment; sensing an emergency condition for the hazardous materials during the shipment; calculating an emergency hazardous condition and extent based on the weather data, shipment data and geographic positioning data (col. 5, lines 32-46); and wherein the emergency hazardous condition and extent is determined remotely based on the geographical position of the shipment (col. 5, lines 17-24).

Hasset further discloses determining optimal and alternate routes by suspending or re-routing shipments when there is potential to encounter a dangerous condition (col. 5, line 42-46).

Hasset does not specifically disclose determining a proposed route calculated based on a risk analysis that consists of an impedance type module which summarizes resistance of a route and which selects the lowest resistance route.

Robinson et al., however, discloses a system and method further comprising determining optimal and alternate routes, and determining a proposed route calculated based on risk analysis that consists of an impedance type model which

summarizes "resistance" of a route and which selects the lowest "resistance" path (col. 3, lines 39-45, col. 2, line 63-col. 3, line 32, col. 4, lines 14-63 and col. 11, lines17-36).

It would be obvious to modify Hasett in view of Robinson et al. in order to provide accurate up-to-date information on the environmental conditions likely to be encountered during shipping which is necessary for traveling across both a pre-planned and altered route as taught by Robinson et al. (col. 3, lines 39-45 and col. 1, lines 12-28).

Neither Hasset nor Robinson et al. discloses wherein calculating an emergency hazardous condition includes providing projected plume dispersion, applicable in response to the emergency condition, wherein the plume dispersion is calculated based on shipment data, geographic positioning data, and near real-time weather data specific to the emergency condition and physical location of the goods; and wherein the emergency hazardous condition and extent is determined remotely based on the geographical position of the shipment.

Smith et al., however, discloses a projected plume dispersion which is related to an emergency condition determination, the dispersion being calculated based on shipment data, geographic positioning data, geospatial data and near real-time weather data specific to the emergency condition and physical location, wherein a recommended response is based on the projected plume dispersion (col. 1, lines 29-62).

Hassett further discloses that a method of electronically marking, identifying, and managing hazardous cargo and vehicles could decrease the risk to the general public and might cost-effectively provide information enroute that would enhance safety measures for emergency personnel called to handle an accidental rupture of a hazardous material container (col. 1, lines 55-61).

Smith et al. further discloses that inevitably in production, transportation, storage and use of chemicals accidents occur that can endanger human, animal, and aquatic life and property (col. 1, lines 24-28). Smith et al. further discloses that some of the chemicals that endanger life are dispersed in plumes and because some chemicals generate plumes while others do not, it has become necessary for response personnel to be able to quickly identify harmful chemicals and develop a protective action zone based on various meteorological and physical conditions surrounding the site, which is especially important where the evacuation of human life might be important but also expensive (col. 1, lines 29-61).

It would therefore be obvious to one skilled in the art at the time of invention to modify the combination of Hassett and Robinson et al. in view of Smith et al. in order to provide for a more comprehensive method of hazardous materials management that maximizes cost-efficiency without compromising safety to humans, animals, and the surrounding environment.

As to claims 26 Hassett further discloses a system further comprising: a network for relaying shipment data, geographical positioning data and near real-time weather data; and an emergency assessment module for projecting potential emergency conditions as a function of the data; wherein information about the projected emergency conditions is transmitted over the network and is available for access at remote locations (col. 5, lines 32-46).

As to claims 28, Hassett discloses a method wherein the weather data is selected from the group consisting of wind speed, wind direction, air temperature, precipitation, percent cloud coverage and combinations thereof (col. 5, lines 42-46) where Hassett

discloses a regional flood warning as an example, which is related at least to precipitation.

As to claims 13, 25, 32 neither Hassett, Robinson et al., nor Smith et al. disclose wherein data on the route and along all possible alternative routes includes population density and distribution, political boundaries, environmental boundaries, surface inclination and topology, road surface type, road dimensions, road height and weight limitations, road authorizations for cargo types, and road segment distances.

Robinson et al. however discloses simplifying the route-planning task by suggesting optimized routings based on minimizing certain parameters (col. 4, lines 30-33) and that a course is optimized around various environmental conditions based on specific criteria (col. 4, lines 43-48). It is well known in the art that population density and distribution, political boundaries, environmental boundaries, surface inclination and topology, road surface type, road dimensions, road height and weight limitations, road authorizations for cargo types, and road segment distances are examples of criteria that are related to parameters that when minimized would provide an optimized route. It would therefore be obvious to one skilled in the art at the time of invention to include such criteria in order to provide the most comprehensive minimization of parameters resulting in the most optimal route.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

10. Any inquiry concerning this communication should be directed to Anthony Gutierrez whose telephone number is (703) 305-1973.

Any questions addressed toward a Supervisory Primary Examiner should be directed to Edward Lefkowitz whose telephone number is (703) 305-4816.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4900. The fax number is (703) 306-5515.

Anthony Gutierrez

2/3/02

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